

United States Patent Hughes

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[54] **DISPENSER FOR CONTINUOUS
BUSINESS FORMS**

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[51] Int. Cl. B65d 5/22

[58] Field of Search 229/33, 30, 34 R, 17 S

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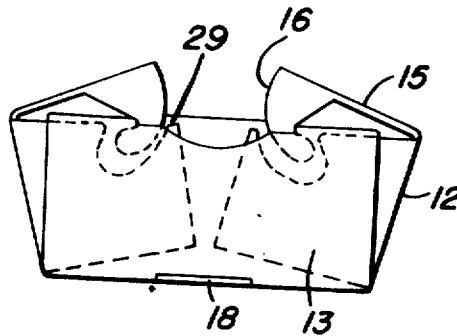
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[57]

ABSTRACT

A container for packaging, shipping, and dispensing continuous business forms having top panels and side panels which are flared outwardly to open the container permitting access to the interior thereof with a locking means on the top panels to retain the container in an open condition during the dispensing operation.

1 Claim, 8 Drawing Figures



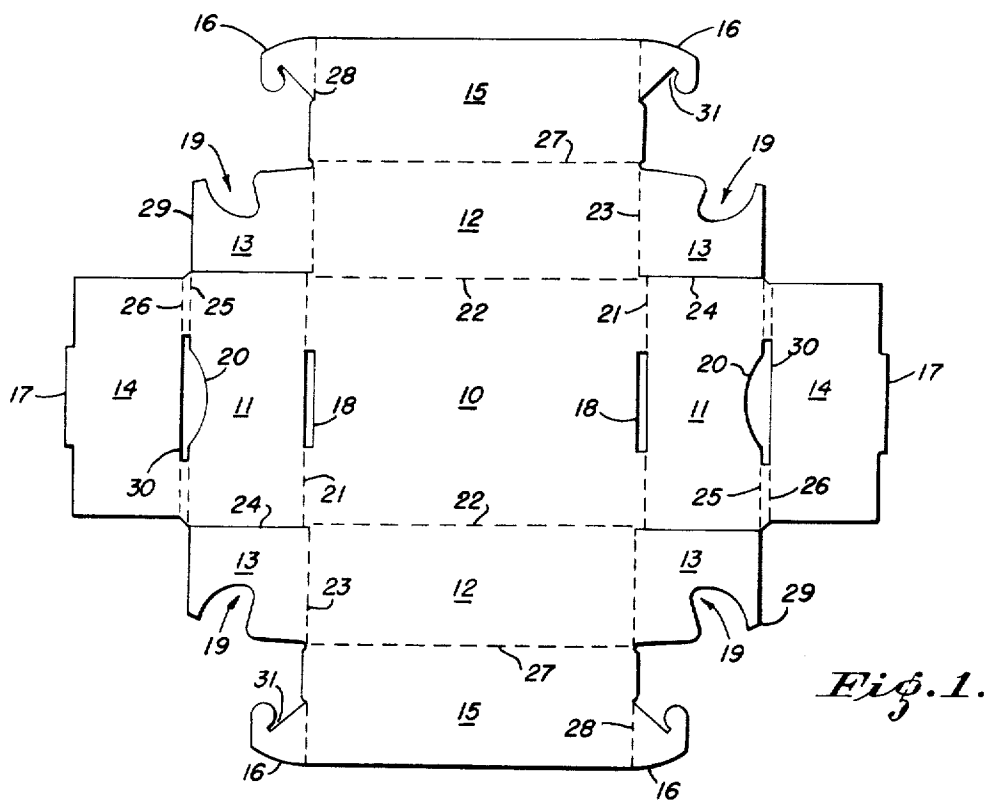


Fig. 1.

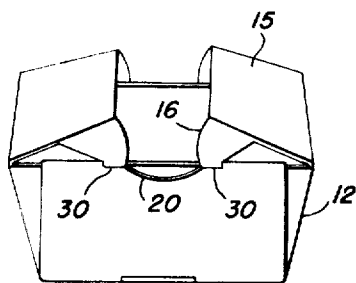


Fig. 7.

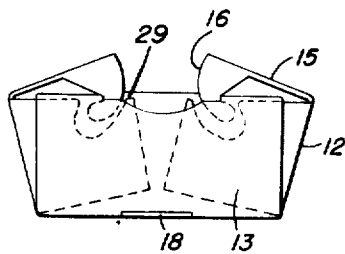


Fig. 6.

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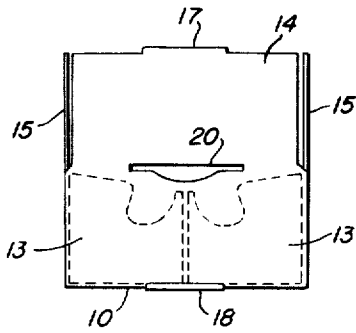


Fig. 2.

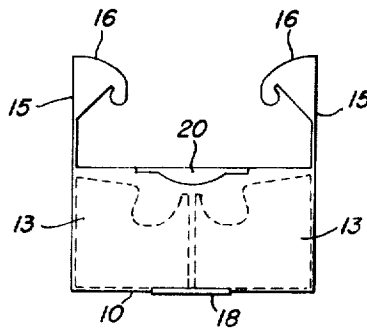


Fig. 3.

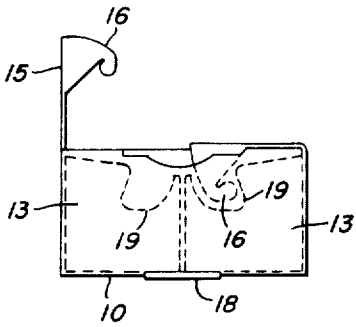


Fig. 4.

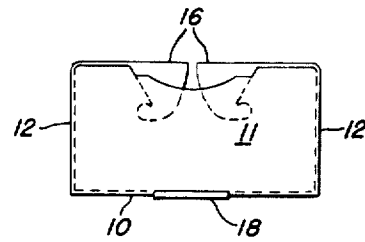


Fig. 5.

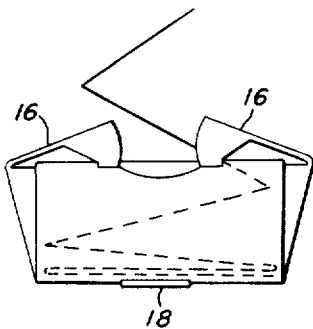


Fig. 8.

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DISPENSER FOR CONTINUOUS BUSINESS FORMS

SUMMARY OF INVENTION

This invention relates to a container for dispensing connected sheets of material arranged in a stack to provide sequential feeding of each sheet from the stack in response to movement of the immediately preceding sheet away from the stack. In particular, the invention is directed to a novel container for shipping and dispensing a supply of manifolded business forms, to permit successive withdrawal of the forms one at a time. The container is formed from a one-piece blank of material which is cut, scored and folded so that it may be set up into the finished container by a simple operation.

Manifolded business forms of many kinds are in very common use and in many different environments. Generally the business forms are packaged in regular slotted boxes and must be dispensed therefrom the best possible way depending upon the circumstances. Often the machines that operate upon the business forms are arranged such that the business forms must be taken from their packages and stacked on the floor thus creating an unsightly and undesirable situation. In order to overcome these and other problems, the container of the present invention was designed.

In accordance with the present invention, a container adapted to contain a supply of manifolded, continuous business forms, to permit the successive withdrawal of the forms, is set up from a one-piece blank of corrugated paperboard or the like. The blank is cut, scored, and folded to comprise a rectangular bottom panel centrally located in the blank and integral with a series of panels on each side thereof and separated therefrom by scored fold lines. The adjacent side panels on two opposed sides of the bottom panel comprise a pair of double panel side walls and the adjacent side panels on the other two opposed sides comprise single integral side walls and top closure flaps. The single side walls attached along the second opposed sides of the bottom panel have end flap extensions attached to the side edges thereof, and these end flap extensions are each folded to lie in the space created by the double panel side walls of the first opposed sides of the bottom panel in the erected condition. In addition, the top closure flaps include locking tabs attached along the side edges thereof which are also inserted in the space created by the double panel side walls and which are locked in the open condition of the container to permit dispensing of the business forms.

It is an object of this invention then to provide a shipping and dispensing container for continuous business forms that may be used in any environment including a drawer or shelf provided therefor. The container of this invention with its cover panels partially opened and locked in place could also be used in restricted vertical height areas.

Another object of this invention is to provide a container for shipping and dispensing serially packaged continuous business forms for use with automatic dispensing equipment.

Yet another object of this invention is to provide a container for continuous business forms that can be stored in knocked down condition but which can easily be erected for packaging. After packaging with business forms, the container is easily and swiftly sealed and when made ready for dispensing, can be used without removing the cover.

Thus a simple and effective shipping and dispensing container is provided which may be manufactured in blank form on available equipment including a simple die-cut press. Only slightly more material is needed to make the container of this invention than would be needed for a regular slotted container of equivalent volume and dimensions. In the preferred embodiment, the container can be folded to partially completed condition from the blank form without the need of additional tape, staples or other securing means. The container is filled with the business forms or other matter to be dispensed and the cover panels are then inserted into position so that the container may then be taped shut. To open the container and put it in condition for dispensing only requires the cutting of

the taped closure and the outward and upward movement of the cover panels to their locked-in-position partially open condition. At this time, the initial serially connected business form or the like is pulled from the container and the remaining forms follow as the need arises. Thus the contents of the container are readily accessible, yet the partially opened cover panels prevent the entry of any unwanted extraneous material and other debris that could mar the appearance and condition of the remaining forms. At any time during a lull in the use of the business forms or for overnight storage, the cover panels could easily be pushed back to their closed position while leaving part of the next form extended out of the opening.

Other and further objects of the present invention will be apparent from the following description, claims and drawing, which by way of illustration, shows a preferred embodiment of the invention and the principles thereof in what is now considered to be the best mode contemplated for applying the principles. Other embodiments of the invention employing the same or equivalent principles may be used and structural changes may be made as described by those skilled in the art without departing from the scope of the present invention.

DESCRIPTION OF DRAWING

FIG. 1 shows a plan view of the blank from which the container is made;

FIG. 2 illustrates a front side view of the container in its early stages of formation;

FIG. 3 shows a side view similar to that of FIG. 2 of the container now ready to be filled with the business forms or other product;

FIG. 4 shows a view like that of FIGS. 2 and 3 with one cover panel folded into the closed position;

FIG. 5 shows a front side view of the container which is filled and closed and ready to be taped shut;

FIG. 6 illustrates the container of FIG. 5 in the open, dispensing condition with the cover panels locked in position;

FIG. 7 shows a perspective view of the container in its open, dispensing condition; and,

FIG. 8 is a view similar to FIG. 6 showing the business forms being withdrawn from the container.

DETAILED DESCRIPTION

Referring now to the drawing, and in particular, to FIG. 1, the blank will be seen to comprise a rectangular shaped bottom panel 10 centrally located in the blank and integral with the adjacent panels at all four sides. The front and back of the blank and the two side walls of the blank respectively are identical in construction, hence similar reference numerals have been used to indicate correspondingly similar panels to overcome any possibility of confusion in the description. In addition the terms front, back and side panels and walls will be used throughout the specification as a matter of convenience only since the container does not have any specific orientation when set-up. Accordingly, for the sake of this description, the double paneled walls 11, 14 will be considered the front and back walls whereas the walls 12 are to be considered side walls.

Referring once again to the blank of FIG. 1, outer front and back wall panels 11 are shown as being attached along fold lines 21 to the bottom panel 10, and the single side wall panels 12 are attached to bottom panel 10 along the fold lines 22. The next adjacent front and back wall panels 14 are attached to the free edge of the panels 11 along a pair of fold lines 25, 26. These attachment fold lines 25, 26 are spaced apart from one another an amount equal to the thickness of the material from which the container is constructed so as to accommodate the end flap extensions along with the locking tabs of the cover panels in the erected condition. The top of the container is closed by a pair of cover flaps 15 attached along the free edges of the side walls 12 along fold lines 27.

The remaining elemental parts of the blank include the side wall end flap extensions 13 attached at each side edge of each

single side wall 12 along fold lines 23. A cut line 24 is located adjacent the outer edges of the outer front and back wall panels 11 to permit the end panel extensions to be folded along their fold lines 23. Thus the end panel extensions 13 remain integral with the blank structure since they are attached to side walls 12 along the fold lines 23. Finally, locking closure tabs 16 are shown attached to the extreme end edges of the top cover flaps 15 along fold lines 28. These locking closure tabs are illustrated in this preferred embodiment as being hook shaped so as to include a locking hook and slot 31.

It is also noted that the blank structure includes certain specific cut-outs and slots for accommodating the different elements of the container in the erected condition. Thus the inner front and back wall panels 14 include tabs 17 at their outer free edges which are locked in the slots 18 located along fold lines 21 when the front and back walls of the container are set-up. Similarly, there are irregularly shaped slotted areas 20 located along the paired fold lines 25, 26 for accepting the top locking closure tabs 16. Each of the slotted areas also include narrow portions 30 at each end thereof for engaging the slots 31 on each locking hook of each closure tab 16. Finally, the side wall flap extensions 13 each include other irregular shaped arcuate cut-outs 19 for permitting relative movement of the hook shaped closure tabs 16 when the container top closure flaps 15 are manipulated for opening the container.

With reference now to FIG. 1 taken with FIGS. 2-5, in cutting the blank, the several slots, tabs and panel extensions of the body forming parts of the blank are so designed and correlated, that the blank may be folded and the different tabs engaged in their respective slots as follows. The container is set-up with the bottom panel 10 on a flat surface and the respective side walls 12 are folded up 90° about fold lines 22. In this position, the side wall end extension flaps 13 are then folded inwardly at right angles to the side walls 12 along the fold lines 23. Next, the front and back double panel walls of the container are formed by initially folding the outer panels 11 upwardly at a right angle to the bottom panel 10 along fold lines 21. FIG. 2 illustrates the container partially folded as set forth above when viewed from either the front or rear of the container. Note the position of inner panel 14 with the side wall extension flaps 13 located directly behind and parallel with the outer panel 11. The side walls 12 and cover panels 15 are shown as continuous and vertically aligned to leave the partially formed container open at the top.

The next step in the set-up of the container is the orientation of the inner panel 14 of the double panel front and back walls to enclose the side wall flap extensions 13 in the space between the inner panel 14 and outer panel 11. FIG. 3 shows the container thus formed by folding panel 14 at the scored lines 25, 26 180° so as to lie parallel and adjacent the side wall flap extensions 13. When this fold is made, the irregularly shaped slot 20 remains open along the upper edges of the front and back walls and the tab element 17 on inner panel 14 is snugly engaged in the slot 18 formed along the fold line 21. As a next step, the locking tabs 16 attached to the top cover panels 15 are folded inwardly about their fold lines 28 to assume the position shown in FIG. 3.

At this stage of the fabrication of the container, the body of the package is completely set up with a bottom and four side walls without the aid of additional securing means and/or props. Accordingly, the container is now ready to be packed with its contents which, in the preferred embodiment, comprises sequentially stacked, continuous business forms. Generally these business forms will comprise a continuous strip of material in which each individual form is separated from each adjacent form by a line of perforations by means of which one form may be severed from the next succeeding form. Sometimes the forms even include additional slots or holes which permit them to be filed on commercially available filing devices. The individual forms are preferably arranged in a zig-zag fashion and arranged in a stack. They may then take the form of duplicate sheets, or be single manifolded forms, or even manifolded in triplicate or quadruplicate as needed. Ac-

cordingly, the stack of manifolded forms as described is then placed in the carton in a position such that the line of perforations connecting each adjacent form lies parallel with the opening in the top of the container. FIG. 8 illustrates the business forms as they are preferably stacked in the container and removed therefrom.

After the container is packed as described above, the condition is as shown in FIG. 3. Subsequently it is only necessary to fold the top closure flaps 15 downwardly into the closed position as shown in FIGS. 4 and 5. Referring more particularly to the latter two Figures, it should be noted that the locking hook tabs 16 are inserted into the irregularly shaped slots 20 at each of the front and back double panel walls of the container. Since the two panels 11 and 14 that form the double panelled front and back portions of the container are separated from one another by the paired, slightly separated fold lines 25, 26, there is enough space between the two panels to accommodate the thickness of each hooked closure tab 16. In addition, since the side wall extension flaps 13 are already occupying the space within the wall panels 11, 14, the necessity for cutting out the arcuate area 19 in each side wall extension flap 13 is made obvious by the illustration in FIGS. 4 and 6.

Initially, the side wall extension flaps 13 give the container the necessary integrity and continuous wall construction that is needed when the container is opened for dispensing. In reality, however, the side wall extension flaps 13 really serve as extension members between the double panel front and back walls and the side walls 12 in the open condition of the container. Secondly, the cut-out areas 19 of side wall extension flaps 13 are generated to take a shape that will permit the top closure panel hook tabs 16 to move within each double panel 11, 14 of the front and back walls. Further, the extreme tips 29 of each flap 13 also help force the locking hooks 16 into their respective locking slots 30 at the ends of slots 20. Note in FIG. 6 wherein the tips 29 are shown as urging the locking tabs 16 into their locked engagement with edge slots 30. In addition, the shape of side wall extension flaps 13 are so designed that the upper edges thereof engage the upper edges of the double panel front and back walls when the container is open as shown in FIG. 6. Thus the preferred construction defined above wherein the front and back walls comprise double panels 11 and 14 offers a novel construction for accommodating both the side wall extensions 13 and the locking tabs 16. The double panels limit the movement of the side wall extensions 13 to a single plane thus preventing the flaps 13 from hinging inwardly about their foldable connection 23 with the side walls 12. Further, the motion of the locking tabs 16 is also restricted by the double panels 11 and 14 and in addition, by the cut-out shape in the side wall extension flaps 13. These different elements each co-act together to limit the outward pivotal movement of the side walls 12 when the container is opened for dispensing.

Thus once the container is filled and closed as shown in FIG. 5, the container is taped closed for shipment to the user. As described hereinbefore, when it is desired to dispense the business forms from the container, it is only necessary to break the seal along the top of the container and then by grasping the open top near the top closure panels 15, pull the panels 15 outwardly and upwardly to the open position as shown in FIGS. 6, 7 and 8. In this open condition as shown particularly in FIG. 8, the supply of continuous, manifolded business forms may be withdrawn one at a time in the desired manner.

From the foregoing description, it is believed apparent that a simple, economical and functional container has been developed which can be set up from a one-piece blank and which is adapted to contain a supply of manifolded, continuous business forms to permit the successive withdrawal of the forms one at a time as needed.

Hence while there has been illustrated and described the preferred embodiment of the invention, it is to be understood that this is capable of variation and modification, and therefore should not be limited to the precise details set forth, but

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should be subject to changes and alterations within the scope of the following claims.

I claim:

1. A shipping and dispensing container for continuous business forms constructed from a one-piece blank of foldable material such as corrugated paperboard, cut and scored to comprise:

- a. a centrally located, rectangular shaped bottom panel with a series of panels at each side thereof, separated therefrom and from one another by scored fold lines; 10
- b. the first single side walls connected along opposed side edges of said bottom panel folded up at right angles to said bottom panel; 15
- c. side wall extension flaps hingedly attached along the side edges of said first single side walls and folded inwardly at right angles to said first side walls; 15
- d. double panel side walls, including inner panels and outer panels with said outer panels being connected along the remaining opposed sides of said bottom panel and folded up at right angles to said bottom panel, said inner panels being connected to said outer panels along spaced, parallel fold lines, and folded over and inwardly about said spaced fold lines to enclose the side wall extension flaps 20

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in the space created therebetween;

- e. locking slots located along the fold lines connecting the outer panels to said bottom panel and locking tabs located along the free edges of each inner panel whereby the double panel side walls are locked in their upright position;
- f. irregularly shaped slots located along each of the spaced fold lines connecting said double panels to one another and lying along the upper edge of said double panel side walls;
- g. top closure flaps hingedly attached along the free edges of said first single side walls;
- h. locking closure tabs connected to the extreme side edges of each top closure flap, and extending through the irregularly shaped slots and into the space formed by the double panel side walls;
- i. arcuate cut-outs in each side wall extension flap for accommodating the locking closure tabs in the space between said double panel side walls; and,
- j. necked down portions at each end of said irregularly shaped slots for locking the closure tabs in position when the container is opened for dispensing.

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